

MMCS D LLD

Release Notes

Applies to Product Release: 01.00.00.17
Publication Date: Sep 30, 2019

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MMCSD LLD version 01.00.00.17

Overview

This document provides the release information for the latest MMCSD Low Level Driver which should be used by drivers and application that interface with MMCSD IP.

MMCSD LLD module includes:

- Compiled library (Big and Little) Endian of MMCSD LLD.
- Source code.
- API reference guide
- Design Documentation

LLD Dependencies

LLD is dependent on following external components delivered in PDK package:

- Board
- EDMA
- OSAL

New/Updated Features and Quality

Release 1.0.0.17

- Fix DMA Transfer Issue >4MB
- Added 1/4/ bit support for EMMC for AMxx/K2 devices
- Fixed the issue of disabling voltage switch function in the example.

Release 1.0.0.16

- Added SMP support
- Making data launch at falling edge (PRSDK-5657) for AM65x
- Fix for data corruption issue.
- Updates to regression test to include interrupt tests by default and use 5MB data transfer

Release 1.0.0.15

- Added support for AM75x
- Fixed a bug in readSem() & writeSem() usage within the driver.
- Regression test enhancement to print the profile information alongside the benchmarks on AM65x

Release 1.0.0.14

- Added benchmark support (RAW & Fatfs mode) to AM65x Regression Test
- Add support to HS-DDR mode of EMMC
- Descoped HS-400 mode of EMMC
- Added SOC level interrupt routing using sciclient on AM65x

Release 1.0.0.13

- Add support for AM65XX
- Fix app execution failure issue on OMAPL138 DSP
- Add support for regression test based on menu for AM65xx

Release 1.0.0.12

- Bug fixes for OMAPL138
- Rules.mk changes

Release 1.0.0.11

- Fix for back-to-back bulk reads while using CMD18/25
- Dra7xx example updates

Release 1.0.0.10

- Add support for AM574x

Release 1.0.0.9

- Add support for getting media (sd/emmc/mmc) parameters such as size, blockCount etc..

Release 1.0.0.8

- Bug fixes for OMAPL13x.

Release 1.0.0.7

- Added DMA and interrupt mode support for OMAPL13x
- Fix performance issues on ARM unit test on OMAPL13x
- Bug fixes for OMAPL13x.

Release 1.0.0.6

- Added the support for OMAPL137 & OMAPL138
- Added support for Event Combiner usage
- Added support for configuring the interrupt mux (CIC/Crossbar) in HwAttrs.
- Bug fix for AM437x eMMC example

Release 1.0.0.5

- Added the support for 192 MHz for UHS-I SD cards for both DMA & Non-DMA versions.
- Fixed the unreliability issues with some UHS-I cards.
- Enabled support for multi-block transfer support for Interrupt Mode (Non-DMA)
- Added socGetConfig()/socSetConfig() APIs to set initialization parameters.
- Merged the non-DMA & DMA source files in to one (MMCSD_v1.c & MMCSDDMA_v1.c has been merged in to one: MMCSD_v1.c). The test examples' source files also have been merged in to one.
- Added tests for ICE_K2G

Release 1.0.0.4

- Added support for UHS memory cards

Note: The max speed for UHS-I SD card is limited to 100 MHz for the DMA version of the library.

Release 1.0.0.3

- Added cache coherency support for the DMA version of the driver

Release 1.0.0.2

- Added support for K2G.

Release 1.0.0.1

- Added M4 support for AM571x and AM572x.
- Added benchmarking support.
- Fixed Klockwork/Misra-C compilation warnings
- Added eMMC support for driver

This is an **engineering release**, tested by the development team for early integration effort
Release 1.0.0.0

- Initial release of low level driver

Resolved Incident Reports (IR)

Table 1 provides information on IR resolutions incorporated into this release.

Table 1 Resolved IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description
CATREQ-2399	Major	MMCSD Driver support for AM65x (A53 & R5)
PRSDK-3599	Major	OMAPL138 MMCSD DSP example app execution fails when booting from SD card
PRSDK-4549	Major	MMCSD: Create Menu based Regression Tests for SD & EMMC
PRSDK-4372	Major	MMCSD: Support for eMMC: 1,4,8 bit modes

Known Issues/Limitations

IR Parent/ Child Number	Severity Level	IR Description

Licensing

Please refer to the software Manifest document for the details.

Delivery Package

There is no separate delivery package. The MMCSD LLD is being delivered as part of PDK.

Installation Instructions

The LLD is currently bundled as part of Platform Development Kit (PDK). Refer installation instruction to the release notes provided for PDK.

Directory structure

The following is the directory structure after the MMCSD LLD package has been installed:

The following table explains each individual directory:

Directory Name	Description
ti/drv/mmcscd	The top level directory contains the following:- <ol style="list-style-type: none">1. <u>Environment configuration batch file</u> The file “setupenv.bat” is used to configure the build environment for the MMCSD low level driver.2. <u>XDC Build and Package files</u> These files (config.bld, package.xdc etc) are the XDC build files which are used to create the MMCSD package.3. <u>Exported Driver header file</u> Header files which are provided by the MMCSD low level driver and should be used by the application developers for driver customization and usage.
ti/drv/mmcscd/build	The directory contains internal XDC build related files which are used to create the MMCSD low level driver package.
ti/drv/mmcscd/device	The directory contains the device specific files for the MMCSD low level driver.
ti/drv/mmcscd/docs	The directory contains the MMCSD low level driver documentation.
ti/drv/mmcscd/example	The “example” directory in the MMCSD low level driver has the infrastructure mode example.
ti/drv/mmcscd/include	The “include” directory has private MMCSD low level driver header files. These files should not be used by application developers.
ti/drv/mmcscd/lib	The “lib” folder has pre-built Big and Little Endian libraries for the MMCSD low level driver along with their <u>code/data size information</u> .
ti/drv/mmcscd/package	Internal MMCSD low level driver package files.
ti/drv/mmcscd/src	Source code for the MMCSD low level driver.
ti/drv/mmcscd/test	The “test” directory in the MMCSD low level driver has unit test cases which are used by the development team to test the MMCSD low level driver.

Customer Documentation List

Table 2 lists the documents that are accessible through the **/docs** folder on the product installation CD or in the delivery package.

Table 2 Product Documentation included with this Release

Document #	Document Title	File Name
1	API documentation (generated by Doxygen)	docs/mmcsdllDocs.chm
2	Design Document	docs/MMCSD_LLD_UserGuide.pdf
3	Software Manifest	docs/MMCSD_LLD_SoftwareManifest.pdf